APPENDIX 6.

COMMENTS FROM SWAT TECHNICAL ADVISORY GROUP AND STAKEHOLDERS

From: LAWPCA [lawpca@gwi.net]
Sent: Monday, November 06, 2000 9:21 AM
To: Mower, Barry F
Subject: Re: Ambient Water Quality Criterion for Mercury

Barry-here are some reports for your file on how other States and EPA Regions are regarding implemetnation of GLI standards on mercury. The best management policy is being prposed in Ohio especially for local limits for indirect dischargers, such as dentists. Vivian

From: LAWPCA [lawpca@gwi.net]
Sent: Monday, November 06, 2000 1:22 PM
To: Mower, Barry F
Subject: draftminutes

Barry, Although i am not a member of the committee I offer a few
changes for your consideration. Vivian

From: LAWPCA [lawpca@gwi.net]
Sent: Monday, November 06, 2000 2:02 PM
To: Mower, Barry F; Bill Zarolinski; Harry Russel; Nick Bennett; Stewart Holm; Terry Haines
Cc: Smith, Andy E.; Winters, Hal; Frohmberg, Eric; Gerry Kamke
Subject: Re: Ambient Water Quality Criterion for Mercury

Barry and other SWAT Team members: I am attaching a copy of Maine's current interim mercury limits for POTWs and industrial direct dischargers, as a backdrop for discussions so far. I aslo attach my dta file based on Mr. merill's memorandum. These are "where we are now" limits and were generally set based on 3 to 4 data points for each plant. Several plants "excceded" these over the summer at least once. Vivian Matkivich (MWWCA)

From: Nick [nbennett@nrcm.org]
Sent: Monday, December 04, 2000 11:53 AM
To: Mower, Barry F
Subject: RE: mercury AWQC

Hi Barry:

Thanks for this. Just to let you know, the Council takes the position that we need strong, scientifically based criteria that are protective of human health, aquatic life, and wildlife. I don't necessarily agree with Stuart that numbers below background are irrelevant; they are meaningful in the sense that we have to get the concentrations of mercury in our water down to these levels in order for them to be in attainment with "fishable" standards and to protect our wildlife. What I would say is that in addition to keeping dischargers from exacerbating the problem, this also means that Maine has to be working regionally and nationally on deposition sources.

Therefore, we would ask that DEP promulgate a technically sound and protective set of criteria whether by adopting from other states that have good criteria or by developing one for Maine.

For what it's worth, I just want to reiteriate that I was mistaken about the human health criterion in the report to Congress.

Also, I'm attaching a table of Great Lakes criteria from Mike Murray, a scientist with the NWF Great Lakes Office, that I though might be helpful.
[[GLHGWQ~1.DOC : 4156 in GLHGWQ~1.DOC]]
Nick.

-----Original Message-----
From: Mower, Barry F [SMTP:Barry.F.Mower@state.me.us]
Sent: Friday, December 01, 2000 5:44 PM
To: Alan Houston; Bill Zarolinski; Cowger,RepScott; Dan Kusnierz; George Lord; Harry Russel; Nick Bennett; Norm Anderson; Rebecca Van Beneden; Stewart Holm; Terry Haines
Subject: mercury AWQC

If you received a previous email from me a few minutes ago please delete it as it was incomplete.

Thank all of you that were able for attending our meeting Nov 3 to discuss an ambient water quality criterion for mercury. Enclosed is a summary of what we discussed including the table of various criteria from EPA and other states. We discussed a recommendation to follow EPA's new approach and use Maine's FTAL (fish tissue action level) for mercury (0.2 ppm) with a BAF determined for Maine (400,000-600,000) which results in an AWQC of 0.3-0.5 ng/l (ppt). Nick also made a proposal to adopt the Mercury Study Report to Congress wildlife number, 0.6 ppt, essentially the same as the first method.

In once sense, since these criteria would be less than background, then they may not mean much. In that case, the current law which does not allow a discharge that increases background, would be the controlling

factor unless rescinded by the legislature. If the current law is kept, it could be very difficult to meet. Then some other management strategy may need to be developed.

But I never took a final poll of all of you to see if you agree. Please let me know if you do or not, and if not what you propose.

We are having another meeting on Dec 15 from 10-12 here at DEP for municipalities and industry and anyone else who wishes to come. You all are welcome, but this is not a SWAT meeting and we are not requesting your presence. I expect it to focus on policy and compliance issues.

<< File: HGAWQC.xls >> << File: HGAWQCM1sum.doc >>

Water Quality Criteria for Mercury in Great Lakes States

Criteria (ng/l or ppt) [a]			Comments	Source
Aquatic Life	**Wildlife**	**Human Health**		
910	1.3	3.1	Lake Michigan Basin	http://www.ipcb.state.il.us/title35/wnload/C302.pdf
1300	-	12	Other waters of state	Same
908	1.3	1.8	Lake Michigan Basin	http://www.ai.org/legislative/iac/te327.html
12	-	150	Other waters of state [b]	Same
	1.3	1.8	Apply statewide	http://www.deq.state.mi.us/pub/swq/res/part4.pdf
910	1.3	1.5	Class 2 waters of Lake Superior Basin [c]	http://www.revisor.leg.state.mn.us/rule/7052/0100.html
2400 [d]	-	6.9	Other Class 2 waters of state [c]	http://www.revisor.leg.state.mn.us/rule/7050/0222.html
910	1.3	3.1	Lake Erie Basin [e]	http://www.epa.state.oh.us/dsw/rules/745-1.html
910	-	12	Ohio River Basin	http://www.epa.state.oh.us/dsw/rules/745-1.html
440 [f]	1.3	1.5	Apply statewide	http://www.legis.state.wi.us/rsb/co (Searchable)
	1.3	1.8		http://www.epa.gov/fedrgstr/EPA-WATE 1995/March/Day-23/pr-82DIR/pr-82.ht

a: Chronic standards. In some cases, states have acute standards for mercury as well.
b: Both criteria apply outside of mixing zone; aquatic life criterion for 4-day average.
c: Class 2 waters - based on aquatic life and recreation (including protection of human health through fish consumption).

d: Acute value, (other value of 4900 given as well). Could not find chronic aquatic life value.
e: For all three criteria, outside mixing zone average value, for total reactive mercury.
f: Chronic criterion for cold water fish, warm water sportfish, and other aquatic life.

From: Nick [nbennett@nrcm.org]
Sent: Monday, December 04, 2000 12:05 PM
To: Mower, Barry F
Subject: Hg

One last thought. I don't think I agree with you about low ppt numbers being unworkable. Take a look at the average limits for facilities in Maine. There are a significant number in the single digit ppt range, including Anson-Madison and Lewiston Auburn, which are not typical small-town POTWs by any means. And this is before we have really started to implement pollution prevention fro mercury in Maine.

Nick

From: Terry Haines [haines@maine.edu]
Sent: Monday, December 04, 2000 3:05 PM
To: Mower, Barry F; Alan Houston; Bill Zarolinski; Cowger,RepScott; Dan Kusnierz; George Lord; Harry Russel; Nick Bennett; Norm Anderson; Rebecca Van Beneden; Stewart Holm; Terry Haines
Subject: RE: mercury AWQC

First let me state clearly that I do not condone discharge of mercury to the atmosphere or surface waters by anyone anywhere at any time. Any mercury is too much mercury. However, mercury is a natural component of the earth's crust and will always be present. Therefore, we can never achieve zero discharge of mercury and will never be able to reduce water concentrations of mercury to prehistoric natural background levels while maintaining current standards of living. Because of the complexity of the biogeochemistry of mercury, I do not believe we have sufficient data to demonstrate that discharge of relatively small amounts of mercury (i.e., a maximum of a few tens of ng/L) to rivers and streams will materially damage aquatic resources in the vicinity of these discharges. The spreadsheet Barry has developed of fish mercury concentrations above and below discharges lends support to this view. However, that mercury is going to go somewhere, and may cause damage to resources in areas remote from the discharge. Inspection of the data in the Maine Interim Limits spreadsheet indicates that most of the facilities are discharging modest amounts of mercury and I think it will be very hard to argue that they should be forced to eliminate any discharge, which is essentially what the proposed regulation would do. The top 20 or so facilities, however, are a different kettle of mercury, and I believe these should be capable of greatly reducing their mercury discharge. I think it would damage our credibility to advocate the establishment of a mercury criterion that is unattainable. I would prefer a more measured approach, perhaps something where a standard is phased in over time, or progressively tightened over time, and focused on the most serious dischargers. I think this would have the best chance of garnering public support, and making a real difference in environmental quality in Maine over the near term.

Terry A. Haines
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5751 Murray Hall, Orono, ME 04469-5751
haines@maine.edu or haines@usgs.gov
phone: 207-581-2578, fax: 207-581-2537
"In the rat race, even if you win, you're still a rat."
<;)====< <;)====< <;)====< <;)====< <;)====<

-----Original Message-----
From: Mower, Barry F [mailto:Barry.F.Mower@state.me.us]
Sent: Friday, December 01, 2000 5:44 PM
To: Alan Houston; Bill Zarolinski; Cowger,RepScott; Dan Kusnierz; George Lord; Harry Russel; Nick Bennett; Norm Anderson; Rebecca Van Beneden; Stewart Holm; Terry Haines
Subject: mercury AWQC

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Thank all of you that were able for attending our meeting Nov 3 to discuss an ambient water quality criterion for mercury. Enclosed is a

summary of what we discussed including the table of various criteria from EPA and other states. We discussed a recommendation to follow EPA's new approach and use Maine's FTAL (fish tissue action level) for mercury (0.2 ppm) with a BAF determined for Maine (400,000-600,000) which results in an AWQC of 0.3-0.5 ng/l (ppt). Nick also made a proposal to adopt the Mercury Study Report to Congress wildlife number, 0.6 ppt, essentially the same as the first method.

In once sense, since these criteria would be less than background, then they may not mean much. In that case, the current law which does not allow a discharge that increases background, would be the controlling factor unless rescinded by the legislature. If the current law is kept, it could be very difficult to meet. Then some other management strategy may need to be developed.

But I never took a final poll of all of you to see if you agree. Please let me know if you do or not, and if not what you propose.

We are having another meeting on Dec 15 from 10-12 here at DEP for municipalities and industry and anyone else who wishes to come. You all are welcome, but this is not a SWAT meeting and we are not requesting your presence. I expect it to focus on policy and compliance issues.

<<HGAWQCM1sum.doc>> <<HGAWQC.xls>>

From: Lotic [lotic@uninets.net]
Sent: Friday, December 08, 2000 3:15 PM
To: Mower, Barry F; Alan Houston; Cowger,RepScott; Dan Kusnierz; George Lord; Harry Russel; Nick Bennett; Norm Anderson; Rebecca Van Beneden; Stewart Holm; Terry Haines
Subject: Re: mercury AWQC

Sorry for the lateness of my reply, but I have had to mull this over for some time. I have read your email and Terry's reply and I have to tell you I am extremely uncomfortable and cannot support a recommendation for a numerical criteria that is unattainable. A criterion should be the standard or the target value for our ambient waters based upon scientific and toxicological information. As I mentioned during our meeting of November 3, EPA has acknowledged that water quality criteria are developed "based solely on data and scientific judgements on the relationship between pollutant concentrations and environmental and human health effects.
Protective assumptions are made regarding the exposure intakes that humans may experience. These criteria do not reflect consideration of economic impacts or the technological feasibility of meeting the chemical concentrations in ambient water".

Given the mercury concentrations identified in Maine's ambient waters and the concentrations reported from wet and dry deposition coming into the state, the adoption of a numerical standard of 0.3 to 0.6 ppt fails "the straight face test". It is both unattainable and it fails to implement a practical approach for the reduction of mercury in the environment. I do not believe with certainty that we either need or want that level of strict standard. One question. What are the socio-economic implications of adopting such a strict standard for the people and businesses of the State of Maine and what are the environmental benefits that will be realized? Use as many blue books as you need.

My suggestion is to adopt a narrative standard that will promote awareness as well as short-term and long-term environmental improvement. This has been done before. Certain Midwestern states are using language like "virtual elimination" of elemental mercury and mercury products as a means to move forward.
For example, the City of Boston just announced the future ban on the sale of mercury fever thermometers. As these types of product controls are implemented, the department could move forward by working with those wastewater facilities with mercury sources that are controllable or amenable to removal.

In summary, I do not believe that we should adopt a prohibitive numerical standard given current ambient conditions, its implications for Maine's citizens and our current level of knowledge.

Bill Zarolinski
Lotic, Inc.
phone: 207-948-3062
Fax: 207-948-3087

-----Original Message-----
From: Mower, Barry F <Barry.F.Mower@state.me.us>
To: Alan Houston <phoward@gwi.net>; Bill Zarolinski <lotic@uninets.net>;

Cowger,RepScott <SCOWGER@state.me.us>; Dan Kusnierz <pinwater@penobscotnation.org>; George Lord <Ecocycle@mint.net>; Harry Russel <HHRUSSELL-ME@worldnet.att.net>; Nick Bennett <nbennett@nrcm.org>; Norm Anderson <Nanderson@MaineLung.org>; Rebecca Van Beneden <rebeccav@MAINE.maine.edu>; Stewart Holm <seholm@gapac.com>; Terry Haines <Haines@maine.maine.edu>
Date: Friday, December 01, 2000 5:47 PM
Subject: mercury AWQC

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>

From: Norman Anderson [NAnderson@mainelung.org]
Sent: Monday, December 11, 2000 11:10 AM
To: Mower, Barry F; Alan Houston; Bill Zarolinski; Cowger,RepScott; Dan Kusnierz; George Lord; Harry Russel; Nick Bennett; Norman Anderson; Rebecca Van Beneden; Stewart Holm; Terry Haines
Cc: Smith, Andy E
Subject: RE: mercury AWQC

The concerns expressed regarding a standard that is lower than background have parallels to the standard setting process for hazardous air pollutants (HAPS). Indeed, even criteria air pollutants such as ozone, particulates, and lead may have background levels above those that are cause for health concern. Needless to say, there has been very little progress over the past 20-30 years in setting ambient air criteria for HAPS. As I recall, mercury was one of the original HAPS, and an emission standard was set back in the 1970s, although I'm not sure how relevant it is now.

At the risk of appearing overly simplistic, it would seem to me that any criterion or standard should prevent mercury emissions from increasing, and motivate some sort of continuous improvement goal. It should also motivate the collection and analysis of data necessary to develop a priority list of sources warranting attention from a pollution control/prevention standpoint.
Also, focusing on my particular sphere of interest, it should somehow be coordinated with other similar pollution prevention strategies (such as limiting nitrogen oxide or particulate emissions from utility boilers).

Whatever the final outcome is, it seems like there's some opportunity here to stimulate creative thinking towards realistic environmental improvement objectives.

-Norm

Norman Anderson, MSPH
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Augusta, Maine 04330
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Fax: (207) 626-2919
Email: Nanderson@mainelung.org

> -----Original Message-----
> From: Mower, Barry F [mailto:Barry.F.Mower@state.me.us]
> Sent: Friday, December 01, 2000 5:44 PM
> To: Alan Houston; Bill Zarolinski; Cowger,RepScott; Dan Kusnierz; George
> Lord; Harry Russel; Nick Bennett; Norm Anderson; Rebecca Van Beneden;
> Stewart Holm; Terry Haines
> Subject: mercury AWQC
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From: Nick [nbennett@nrcm.org]
Sent: Thursday, December 14, 2000 4:34 PM
To: Lotic; Mower, Barry F; Alan Houston; Cowger,RepScott; Dan Kusnierz; George Lord; Harry Russel; Norm Anderson; Rebecca Van Beneden; Stewart Holm; Terry Haines
Cc: Smith, Andy E.; Frohmberg, Eric
Subject: RE: mercury AWQC

[[SWATHG~1.DOC : 5403 in SWATHG~1.DOC]]

December 14, 2000

To the SWAT Committee:

This e-mail concerns the development of ambient water quality criteria for mercury. First, as background, it is important to remember that DEP is required by law to develop criteria that are protective of human health, aquatic life, and wildlife. To quote the statute:

"The Department of Environmental Protection shall develop proposed statewide criteria for mercury that are protective of human health, aquatic life and wildlife. In developing the criteria, the department shall consider all available information, including standards developed by other states, the Great Lakes region and the United States Environmental Protection Agency and any information provided by the Department of Human Services, Bureau of Health" (Reference 1).

In addition, another relevant piece of background information comes from the Code of Federal Regulations:

"131.11 Criteria

(a) *Inclusion of Pollutants*: (1) States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use.

(2) Toxic pollutants. States must review water quality data and information on discharges to identify specific water bodies where toxic pollutants may be adversely affecting water quality or the attainment of the designated water use or where the levels of toxic pollutants are at a level to warrant concern and must adopt criteria for such toxic pollutants applicable to the water body sufficient to protect the designated use." (Reference 2)

Currently all of Maine's waters violate their designated use of fishing due to mercury contamination.

Therefore, it is the position of the Natural Resources Council of Maine (NRCM) -- and it is a legal obligation -- that DEP must recommend to the legislature water quality criteria that are truly protective of human health, wildlife, and aquatic life. Clearly, there is too much mercury in our water now. We have fish advisories in all of our inland waters that

strictly limit -- and in some cases for some species, completely recommend against -- fish consumption. It is also clear that our wildlife is threatened by mercury. "Based on risk categories developed from the literature and *in situ* studies by BioDiversity Research Institute and their collaborators, 28% of the breeding loon population in Maine is estimated to be at risk, while 40% of the eggs laid are potentially impacted… Recaptured adult loons exhibit a significant annual increase of Hg (9% in males, 5.6% in females) that we predict will significantly reduce lifetime individual performance (Reference 3). Maine's eagles have comparable levels of mercury contamination to Maine's loons and the lowest reproductive rate of any major population in the US (Reference 4).

Again, this information tells us that mercury levels in our waters are already too high now. Levels of mercury that are "safe" must be lower than what we currently have, or we would not have all of the problems associated with mercury that we do -- both wildlife and human-health related. Our new criteria must reflect this reality.

A truly protective set of criteria is also not only important in terms of licensed discharges to our waters, but it is also important in terms of enforcing limits on air deposition as well. In Wisconsin and Florida, EPA has already begun work on air TMDLs that model the relationship between air pollution sources of mercury and concentrations in waters to which the mercury is deposited (Reference 5). Maine must, with the help of EPA and other states, eventually perform the same or similar exercises to ratchet down on air sources that are contributing to mercury contamination of our waters. We need accurate criteria in order to have target values for these sorts of exercises.

In addition, concerning direct discharges to surface water, Maine statute is very clear that the DEP "may issue a discharge license or approve water quality certification for a project affecting a water body in which the standards of classification are not met if the project does not cause or contribute to the failure of the water body to meet the standards of classification" (Reference 6). Because Maine waters are not in attainment with the standards of their classification (i.e., they do not meet the designated use of fishing), DEP cannot license discharges that increase the amount of mercury in our waters.

Although NRCM will maintain this position strongly, we are very willing to be flexible in terms of a compliance time

table and to commit our own resources to help reduce sources of mercury that end up in discharges to our waters. We do not believe that drastically reducing or eliminating mercury from discharges to our surface waters should be a treatment-based effort. It is clearly important to reduce mercury sources. To this end, NRCM is already in a partnership with DEP and Maine hospitals to virtually eliminate the use of mercury in hospitals over the course of the next several years. We also believe that getting mercury out of dentistry will be important, because so much of the mercury in domestic wastewater comes from dental amalgam (the mercury leaches out fillings and is excreted in human waste). We are also working in the legislature to get mercury out of consumer products and would welcome help from industry and municipal treatment plant operators in all of these endeavors.

Finally, it should also be noted that many POTWs and industrial facilities are very near to where they need to be in terms of compliance according recent DEP data (i.e., they have discharge concentrations under 10 ppt). Out of 149 facilities, more than 50 (I counted 57) facilities had average discharge concentrations under 10 ppt (Reference 7). This is true even without significant pollution prevention efforts aimed at source reduction of mercury for many or most of these facilities. This means that reducing mercury to low single digit ppt levels for all of Maine's facilities should be feasible through source reduction.

I would like to make two final points. The first is in response to the discussion of the relationship between inorganic and methylmercury in water that took place both at our meeting and through e-mail exchanges. I do believe it is reasonable to develop bioaccumulation factors (BAFs) for inorganic mercury in water to methyl mercury in fish. While there is variability in the values of these BAFs, variability is something that is frequent in environmental contaminant data, and the variability of these BAFs is well within the range of variability we see for other environmental data. Indeed, we see that that bioaccumulation factors are mostly within a factor of two or three across the state (Reference 8). Certainly, it is reasonable to use statistics and conservative assumptions to account for this degree of variability. In addition, while NRCM acknowledges that methylation rates may differ in different environments and that the ratio of MeHg to inorganic Hg in water may also vary, we believe that the bioaccumulation process offers many opportunities for "smoothing" of this variability. In addition, we are not convinced that the ratio of MeHg to

inorganic Hg in the water column is necessarily the critical relationship in the bioaccumulation process. The concentration of MeHg in sediment versus that of inorganic mercury in the water column or in sediment may in fact be a more critical relationship. In any event, environmental variability is something that is dealt with in every ambient water quality criterion; mercury is not different.

Lastly, as SWAT members consider the issue of the mercury water quality criteria, please keep in mind that Maine is committed to an international agreement signed by the Governor with the northeastern Canadian provinces and the New England states. This document states as its goal: "The virtual elimination of the discharge of anthropogenic mercury into the environment, which is required to ensure that serious or irreversible damage attributable to these sources is not inflicted upon human health and the environment" (Reference 9). The criteria should be developed with this commitment in mind.

Please let me know if you have questions.

Sincerely,

Nick Bennett
Staff Scientist
Natural Resources Council of Maine

References

1. Maine Session Laws. 1999. Chapter 500 S.P. 716 - L.D. 2038
2. 40 CFR CH 1. 131.11.
3. David Evers, Chris De Sorbo, and Lucas Savoy. 2000. Assessing the impacts of methylmercury on piscivorous wildlife as indicated by the Common Loon, 1998-99. 1999 Final Report. Submitted to: Maine Department of Environmental Protection. Surface Water Ambient Toxic Monitoring Program. March 31.
4. Linda Welch. 1994. Contaminant Burdens and Reproductive Rates of Bald Eagles Breeding in Maine. US Fish and Wildlife Service.
5. See, for example, http://www.epa.gov/OWOW/tmdl/madppfs.html, for a brief description of this work.
6. 38 MRSA 464 (F)(1-a)(3)

7. Maine DEP. 2000. List of interim limits for Maine dischargers. August 24.
8. Andy Smith and Eric Frohmberg. Handout to SWAT Committee.
9. New England Governors/Eastern Canadian Premiers. 1998. Mercury Action Plan.

From: lawpca@gwi.net
Sent: Wednesday, December 27, 2000 2:40 PM
To: Mercury Policy, Legislation, and Regulations
Cc: Mower, Barry F
Subject: [mercury_policy] phenyl mecuric acetate

>As a wastewater operator, I am interested in discharges of outdated lab reagents and medicines that contain mercury preservatives. Wal-Mart's Equate nasal spray contains 0.02 mg/mL of Phenylmercuric Acetate as a preservative. Commercial pH buffers 4 and 7 also contain phenyl mecuric acetate (62-38-4) as a preservative. How much mercury is is phenyl mecuric
acetate mg/G? I have seen MWRA's extensive list of mercury preserved hospital lab reagents, but have not seen such a list of "brand name" products sold at retail. Has anyone?

Vivian Matkivich
Lewiston-Auburn Water Pollution Control Authority
207-782-0917

You are currently subscribed to mercury_policy as:
Barry.F.Mower@state.me.us
To unsubscribe send a blank email to
leave-mercury_policy-228S@lyris.newmoa.org

From: Terry Haines [haines@maine.edu]
Sent: Tuesday, January 02, 2001 3:12 PM
To: Mower, Barry F
Subject: RE: mercury report to Legislature

Hi Barry:

I have reviewed the report and generally agree with it. Two things you might consider are:

1. The large variation in fish mercury content among lakes suggests that there are major factors affecting the bioaccumulation of mercury from the environment that we don't yet understand. The BAF is a major oversimplification of a very complex process, and should be recognized as such.

2. The pollock and mackerel data lend support to the hypothesis that human activity affects fish mercury content over and above atmospheric deposition, and supports the need to reduce discharge of mercury into surface waters.

Terry A. Haines
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5751 Murray Hall, Orono, ME 04469-5751
haines@maine.edu or haines@usgs.gov
phone: 207-581-2578, fax: 207-581-2537
"In the rat race, even if you win, you're still a rat."
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-----Original Message-----
From: Mower, Barry F [mailto:Barry.F.Mower@state.me.us]
Sent: Friday, December 29, 2000 3:47 PM
To: Courtemanch, Dave L; Merrill, Dennis L; Pierce, Sterling; Lennett, David; Brooks, James P; 'David VanWie'; Smith, Andy E.; Frohmberg, Eric; Winters, Hal; Bourque, Peter; Analeis Hafford; Bill Taylor; Bob Nadeau; Brad Moore; BRI; Bruce Nicholson; Carl Akeley; Charles Applebee; Chris Hall; Douglas Barton; Gerry Kamke; Heather Swan; Ken Gallant; Patricia Ianni; Peter Clark; Sandy Perry; Scott Cowger; Scott Reed; Smith, Andy E.; Vivian Matkivich; Alan Houston; Bill Zarolinski; Cowger,RepScott; Dan Kusnierz; George Lord; Harry Russel; Nick Bennett; Norm Anderson; Rebecca Van Beneden; Stewart Holm; Terry Haines
Subject: mercury report to Legislature

Here is a draft of the mercury Ambient Water Quality Criteria report due the Legislature Jan 15, 2001 for your review and comment. Since we need to make any necessary changes and get the report printed by Jan 12, we need comments ASAP and no later than Jan 5, earlier if they are substantial, or we will not be able to consider them.

As you will see we are recommending elimination of 38 MRSA section 420(1)(A) the 'no discharge that increases the natural concentration' section and some other changes to clean up the statute. We are proposing that we use our upcoming AWQC rule-making to adopt new EPA criteria including mercury. EPA will publish a new mercury criterion in the FR within the next week or so,

which allows states to adopt site-specific criteria. We will propose to adopt statewide site-specific criteria for mercury by rule. Ala the new EPA
AWQC, we will propose a Fish Tissue Criterion (FTC). We will propose 0.2 ppm, the Bureau of Health's current Fish Tissue Action Level for women of childbearing age and children under 8. And we will propose to use a BAF of
1-1.3 million which results in an AWQC of ~0.2 ppt.

Knowing that most facilities will have difficulty meeting the new FTC, at least initially, we will also propose in rule a waste minimization approach, with license limits based on the existing interim mercury limits, and P2 plans that require more effort to reduce by tiers. Facilties might be placed into tiers by the calculated increase in mercury levels in their receiving waters; the higher the projected increase in the receiving water, the more work needs to be done. Remember this is a draft and ideas are welcome, especially for the P2 portion.

Enclosed are the main document HGAWQC.doc, and table 1 HGAWQC1t1.xls in MS
Word 97 and Excel 97

<<HGAWQC.doc>> <<HGAWQC1t1.xls>>

From: LAWPCA [lawpca@gwi.net]
Sent: Tuesday, January 02, 2001 3:35 PM
To: Mower, Barry F
Cc: William E. Taylor; Michael Barden; Geoff Pellechia; Annaleis Hafford; Gerald Kamke; Charles McDowell; Bentzel, Dick; Brad Moore; David Keith; Janet Abrahamson; Joan Kiszely; John Hart; Mike Bolduc; Paul Wintle; Phyllis Rand; Thomas Wiley; Steve Harris; Scott Clukey; Ron Letarte; Jay Pimpare; Howard Carter; Dave Anderson; Andrew Rudzinski; Rogers, James R; Steven Lane; Russ Mathers; Nicholson, Bruce; John Barlow; Deb McGrath; Brent Dickey; Bill Zarolinski; Waring, Mary
Subject: Draft Report to Legislature: mercury limit

Barry: Because time is really important, I have quickly jotted down some comments for you. If you need more substantive material, like a summary of requirements for TMDL allocations when the river does not have attainment, and the requirments development of local limits, I can get these to you.
However, you probably could get it quicker and better from DEP permit writers like Greg Wood, DEP's pretreatment program coordinator, Jim Rogers, and TMDL experienced staff, like Paul Mitnik. Thanks for the opportunity to comment. Vivian Matkivich, MWWCA, 207-782-0917

To: Barry Mower
From: Vivian Matkivich, MWWCA
January 2, 2001

Here are some comments on the draft report to the Legislature. Thanks for getting this out to the stakeholders so soon.

1. Stakeholders concern: An instream water quality limit lower than the actual instream concentration requires that the State and EPA refuse to write new permits, or allow growth (increased discharge) for existing permittees, until a Total Maximum Daily Loading (TMDL) has been established, and allocations made. The TMDL requirements, and resulting adverse economic impacts, should be explained in the report to the Legislature.
2. Stakeholders concern: Local limits for indirect dischargers to all publicly owned wastewater treatment plants will be necessary. Only 14 or 15 municipalities currently have legal authority to write permits for indirect dischargers. Who will write the rest of the local limits? In any case, if the treatment plant has to meet 0.2 ng/L at end of pipe, this virtually makes the local mercury limit for industry less than 0.2 ng/L, and probably zero discharge. If the municipal permit writer can use 0.2 ng/L as an instream limit, allowing for mixing zones (dilution), its still a problem because of the TMDL allocation requirement. If the waterbody is above 0.2 ng/L, its still probably a zero limit for industry until an allocation is made to increase the POTW's limit. Otherwise the industrial users/indirect dischargers are contributing to "pass-through." As a POTW exceeding our interim end-of-pipe limit of 4.5 ng/L, we are already concerned about "pass-through." The effects of the proposed water quality standard on municipalities and indirect dischargers needs to be expressed in the report.
3. Stakeholders meeting: Nothing is noted about atmospheric deposition of mercury as being the primary cause of fish advisories in Maine. David Van Wie said the State would be able to address atmospheric deposition by giving a TMDL allocation (I assumed to be expressed as specific air emissions limits to Midwest utilities, etc.). If the DEP has genuine plans to address atmospheric deposition by TMDL, this needs to be expressed in this report.

MEMO

To: Barry Mower
From: Bruce Nicholson
Date: 1/3/01

Re: Comments on the Draft Mercury Report to the Legislature

A couple of comments for your consideration on the draft report. These comments are mine and should not be attributed to MWWCA. Thank you for providing the draft to the interested parties for comment.

1. The table to the November 3, 2000 SWAT meeting notes in Appendix 1 is not included, perhaps by design, but I think it should be included.

2. The DEP's position up through 11/3/00 was that mercury was subject to EPA's AWQC in effect on 8/13/97, and I don't understand why there is now a sudden change in this position as evidenced in the report on page v, "Mercury was not subject to the AWCQ but rather had its own narrative criterion (38 MRSA section 420(1) (A) since 1971, ...". This sentence does not square with the 11/3/00 DEP SWAT meeting notes. See page xvii of the report (November 3, 2000 SWAT meeting notes in Appendix 1, 1st page last sentence in 1st paragraph)-- "It is the DEP's position that US EPA AWQC that were recommended on August 17, 1997, the last time DEP made changes to Chapter 530.5, are Maine's current criteria." The AWQC in effect on 8/13/97 included criteria for mercury, and this criteria was provided on the referenced attached table (now absent from report, see comment above). This mercury criteria has also been historically posted on the DEP's web page at www.state.me.us/dep/blwq/docmonitoring/dmlist.htm as Maine's "adopted criteria". I believe you also confirmed this on 12/15/00 in response to my inquiry at the stakeholders meeting, although acknowledging that the Department's position was in dispute. The argument being that mercury is addressed separately in 38 MRSA section 420(1) with a narrative criteria and "any other toxic substance" is dealt with in section 420(2) by adopting the EPA AWQC by reference. The fact remains, however, that: 1) Maine's AWCQ appear in both statute and regulations (DEP Chapter 530.5 promulgated by the BEP); 2) there is no carve out for mercury in Chapter 530.5 which on its face regulates all toxics with national water criteria in accordance with EPA AWQC or alternative criteria established in the rule; and 3) the statutory authority for the BEP's rulemaking in Chapter 530.5 is 38 MRSA sections 420 and 464, therefore, the argument that section 420 trumps the mercury AWQC established by the BEP in Chapter 530.5 is not entirely valid. The legislature has given the BEP specific rulemaking authority with respect to water quality criteria in 38 MRSA section 464(5):

> "Rules shall be promulgated by January 1, 1987, and as necessary thereafter, and shall include, but are not limited to, sampling and analytical methods, protocols and procedures for satisfying the water quality criteria, including evaluation of the impact of any discharge on the resident biological community."

Finally, I don't believe it is valid to say that just because mercury has a narrative criterion in 38 MRSA section 420(1), it can not also be subject to numeric criterion. It is not necessarily an either or scenario, as evidenced by provisions for both narrative and numerical water quality criteria in DEP Chapter 530.5(A)(1) and (2). Has there been an official change in the Department's position on this issue?

3. I have to take issue with the statement attributed to me in Appendix 2, "Bruce Nicholson said that maybe the existing law of no discharge would be preferred over the proposed AWQC." I have always believed that any "risk-based criteria" which is the legislative directive in developing a statewide criteria that is protective of human health, aquatic life and wildlife after consideration of all available information would be better than the existing narrative standard in 38 MRSA section 420(1), because the 1971 standard can never be enforced in practice; and any statements that we should not "backslide" from it are silly, because for good reason the DEP has never enforced the standard. The reasons being: 1) how would a NPDES permit writer ever translate, "… in any concentration which increases the natural concentration of mercury in the receiving waters" into an enforceable numeric permit condition; and 2) a straight reading of the statute indicates it is supposed to apply to all indirect as well as direct dischargers of mercury. This would pick up nonpoint discharges of mercury including stormwater discharges, as well as all non-domestic indirect dischargers of mercury discharging into POTWs. What was being discussed at the 12/15/00 meeting was this new concept of facilities to take additional mandatory pollution prevention measures or BMPs if they exceeded the new standard. What I spoke to was, that to the extent that the trigger to take these prescribed measures was linked to exceedances of the standard in the old law (any concentration above the "natural concentration" in the receiving waters), it should be noted that the DEP has only determined the so called natural concentration mercury in Maine's fresh waters not marine waters.

4. I am not sure that it is accurate to state that a general consensus was reached on the concept of compliance schedules and mandatory additional pollution prevention/BMPs for facilities that can not meet a 0.2 ppt AWQC. I do not think enough details were provided for a consensus and the stakeholders were hearing the concept floated for the first time. One potential issue that I see as unfair, is that the burden of this new pollution prevention work appears to fall only on the shoulders of existing 38 MRSA section 413 facilities that have interim limits established under DEP chapter 519. There is no discussion sharing this burden with: 1) other section 413 dischargers that the DEP has exempted under Chapter 519 (land application facilities, overboard dischargers, CSOs, snow dumps, pesticides applications, and all the various Group III facilities; 2) nonpoint source dischargers of mercury; 3) indirect dischargers of mercury into POTWs and 4) sources of atmospheric deposition of mercury which is the major source of mercury contamination in Maine.

Mr. Barry Mower
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017

Dear Barry:

This letter represents the comments of the Natural Resources Council of Maine (the Council) on your draft report "Development of Ambient Water Quality Criteria for Mercury". On the whole, the Council is very supportive of this document. In particular, we support DEP's use of the BAF of one million, the Fish Tissue Action Level of 0.2 ppm, and the AWQC of 0.2 ng/l. We also commend DEP for doing this very substantial piece of work in such a short time and making it available to the public quickly.

In addition, we support DEP's development of a pollution-prevention based policy for dealing with mercury discharges and the recognition of the importance of source reduction in this process. We also agree that the details of this policy should be developed through rulemaking and look forward to participating in that process.

However, we are concerned about the use of the current set of interim license limits as permanent future limits in discharge licenses, an action this report implies DEP may take. The Legislature clearly asked DEP to develop these limits only as an interim measure to prevent increases in mercury pollution while DEP developed criteria. As we stated clearly at the meeting on December 15th, these interim limits will not drive pollution prevention measures. Although we recognize that there needs to be flexibility in terms of the timing of compliance with the new criteria and that this process will be a long term effort, the Council believes there must also be continuous progress towards the goal of compliance with the criteria. The Council also believes that license limits are the most important tool in terms of driving pollution prevention efforts and that DEP should not rely on best management practices alone -- although these too are important -- to work towards compliance with the new mercury criteria. We are willing to think flexibly about compliance schedules, and as David Van Wie discussed at the stakeholders' meeting, tiered approaches requiring more rapid improvements and more substantial efforts by facilities discharging more mercury. However, we believe use of the current interim limits as long-

term license limits will hinder improvements to effluent quality. We look forward to working with DEP on the details of a compliance program during the rulemaking process.

In addition, we are concerned about DEP's proposal to base tiers on a given "facility's impact on the receiving water concentration of mercury". The Council believes DEP must remember that mercury is a bioaccumulative toxicant with the potential for far-field and sediment impacts. Therefore, mass load is just as important, if not more so, than receiving water concentration, and should also be considered when developing tiers.

The Council also believes that DEP's apparent decision not to promulgate a wildlife criterion for mercury is unacceptable. DEP notes in its report that "PL 1999 Chapter 500 section 6 required that 'the Department of Environmental Protection shall develop proposed statewide criteria for mercury that are protective of human health, aquatic life, and wildlife'." DEP also notes that "that 28% of Maine's loons are considered at risk based on levels of mercury reported to cause reproductive effects in laboratory studies." Therefore, it is both a clear legal obligation and an ecological necessity to develop a wildlife criterion. However, the Council understands DEP's concern about using an unpromulgated wildlife criterion from EPA's report to Congress. Therefore, we recommend that DEP work with Dave Evers to develop a wildlife criterion based on his work with loons. From a review of his report prepared for Maine DEP, we believe that he should be very capable of assisting DEP in developing a wildlife criterion quickly.

Thank you again for your effort on this report. Please let me know if you have questions.

Sincerely,

Nick Bennett
Staff Scientist

From: Carlton E. Akeley [akeleyce@GNPaper.com]
Sent: Friday, January 05, 2001 10:49 AM
To: Mower, Barry F
Cc: Brian R. Stetson
Subject: RE: mercury report to Legislature

It still came through garbled. I would like the material mailed even though it may be to late to comment on it. I understand Pierce, Atwood and/or MPPA will be commenting. My comments from your cover letter explanation would be that the recommended AWQC seems to be based on the most conservative assumptions possible. Considering this fact, it becomes even more important to the regulated community that the criteria for setting discharge limits be very clearly spelled out. (I suspect that very few facilities have any chance of coming close to 0.2ppt in their discharge in the foreseeable future because of background levels.) Your cover letter indicates discharge limits will be "based on" interim limits. Does this mean the existing interim limits would be continued for some time? If they were subject to change I would be interested to know how the magnitude of the change would be determined. I would also like to understand better what is meant by "more effort" in reference to P2 plans.
What P2 requirements would you envision for vaious levels of Hg effluent concentration?

Thank you.

Carl Akeley

-----Original Message-----
From: Mower, Barry F
Sent: Thursday, January 04, 2001 5:29 PM
To: 'Carlton E. Akeley'
Subject: Re: mercury report to Legislature

Sorry. Here it is again. If you don't get it this time I will put it in the mail, but you probably won't get it before we have to go to print.

-----Original Message-----
From: Carlton E. Akeley [mailto:akeleyce@GNPaper.com]
Sent: Wednesday, January 03, 2001 8:14 AM
To: Mower, Barry F
Subject: RE: mercury report to Legislature

This document, as well as the updated appendix 4 from Eric Frohmberg, came through in a form I could not recover. Could you resend them or send them snail-mail. My address is Carl Akeley, Great Northern Paper, 1 Katahdin Avenue, Millinocket, ME 04462. Thanks.

Carl

-----Original Message-----
From: Mower, Barry F

Sent: Friday, December 29, 2000 4:02 PM
To: Courtemanch, Dave L; Merrill, Dennis L; Pierce, Sterling; Lennett, David; Brooks, James P; 'David VanWie'; Smith, Andy E.; Frohmberg, Eric...
Subject: mercury report to Legislature

Here is a draft of the mercury Ambient Water Quality Criteria report due the Legislature Jan 15, 2001 for your review and comment. Since we need to make any necessary changes and get the report printed by Jan 12, we need comments ASAP and no later than Jan 5, earlier if they are substantial, or we will not be able to consider them.

As you will see we are recommending elimination of 38 MRSA section 420(1)(A) the 'no discharge that increases the natural concentration' section and some other changes to clean up the statute. We are proposing that we use our upcoming AWQC rule-making to adopt new EPA criteria including mercury. EPA will publish a new mercury criterion in the FR within the next week or so, which allows states to adopt site-specific criteria. We will propose to adopt statewide site-specific criteria for mercury by rule. Ala the new EPA AWQC, we will propose a Fish Tissue Criterion (FTC). We will propose 0.2 ppm, the Bureau of Health's current Fish Tissue Action Level for women of childbearing age and children under 8. And we will propose to use a BAF of 1-1.3 million which results in an AWQC of ~0.2 ppt.

Knowing that most facilities will have difficulty meeting the new FTC, at least initially, we will also propose in rule a waste minimization approach, with license limits based on the existing interim mercury limits, and P2 plans that require more effort to reduce by tiers. Facilties might be placed into tiers by the calculated increase in mercury levels in their receiving waters; the higher the projected increase in the receiving water, the more work needs to be done. Remember this is a draft and ideas are welcome, especially for the P2 portion.

Enclosed are the main document HGAWQC.doc, and table 1 HGAWQC1t1.xls in MS Word 97 and Excel 97

From: bnicholson@woodardcurran.com
Sent: Friday, January 05, 2001 11:10 AM
To: Mower, Barry F
Cc: lotic@uninets.net; bmoore@midmaine.com; brentd@skowhegan.org; dskeith@somtel.com; dmcgrath@katahdinlab.com; jabrahamson@kstd.com; parisud@megalink.net; john.leslie@bfi.com; pcloutier@spsd.org; wintle@saturn.caps.maine.edu; waterrat@megalink.net; sclukey@brewerme.org; slane@agate.net; wiley@pwd.org; lawpca@gwi.net
Subject: RE: RE: mercury report to Legislature

CC: "'lotic@uninets.net'" <lotic@uninets.net>, "'bmoore@midmaine.com'" <bmoore@midmaine.com>, "'brentd@skowhegan.org'" <brentd@skowhegan.org>, "'dskeith@somtel.com'" <dskeith@somtel.com>, "'dmcgrath@katahdinlab.com'" <dmcgrath@katahdinlab.com>, "'jabrahamson@kstd.com'" <jabrahamson@kstd.com>, "'parisud@megalink.net'" <parisud@megalink.net>, "'john.leslie@bfi.com'" <john.leslie@bfi.com>, "'pcloutier@spsd.org'" <pcloutier@spsd.org>, "'wintle@saturn.caps.maine.edu'" <wintle@saturn.caps.maine.edu>, "'waterrat@megalink.net'" <waterrat@megalink.net>, "'sclukey@brewerme.org'" <sclukey@brewerme.org>, "'slane@agate.net'" <slane@agate.net>, "'wiley@pwd.org'" <wiley@pwd.org>, "'lawpca@gwi.net'" <lawpca@gwi.net>

Barry,
My responses for your consideration.

1. Yes, but obviously it is the DEP's call. I am just surprised that the Department's official position now is that it does not have a numeric AWQC for mercury per Chapter 530.5.

2. I thought it would matter for the DEP because by taking the position that Maine never had a numeric AWQC for mercury, the Department is admitting that the State is in violation of the the Clean Water Act - - CWA section 303(c)(2)(B) which requires that that "Whenever a State reviews water quality standards pursuant to paragraph (1) of this subsection, or revises or adopts new standards pursuant to this paragraph, such State shall adopt criteria for all toxic pollutants listed pursuant to section 307(a)(1) of this Act for which criteria have been published under section 304(a).... Such criteria shall be specific numerical criteria for such toxic pollutants." The Department's prior position up through 12/15/00 was that 'we did this through rulemeking per Ch 530.5 for all toxics including mercury.' Now the position reflected in the draft report is Maine never had a numeric mercury AWQC.Under this new position the State will remain in violation of the CWA section 303 for mercury until the BEP adopts through rulemaking the new 0.2ppm/ 0.2 ppt AWQC to be proposed by the DEP sometime in 2001 assuming the legislature passes the DEP's proposed bill. You might want to check with someone as to whether this new positon effects NPDES delegation.

3. I tried to clarify what I thought was discuused in my comments.

4. I think P2 is the way to go and that the POTWs are more than willing to do their fair share which they are under Chapter 519. It still would be nice to put the scope of the problem into perspective for the

legislature-- this is primarily an air deposition problem. The 1998 laws you mention permit Maine solid waste incinerators to emit up to 100 lbs of mercury each. The biggest 75POTWs in Maine studied by the DEP in 1998 discharged 2.6 pounds of mercury total according to the 1999 Mercury in Wastewater Report.

From: Barry.F.Mower
Sent: Thursday, January 04, 2001 5:55 PM
To: "'bnicholson@woodardcurran.com'" <bnicholson@woodardcurran.com>
Cc: "'lotic@uninets.net'" <lotic@uninets.net>; "'bmoore@midmaine.com'" <bmoore@midmaine.com>; "'brentd@skowhegan.org'" <brentd@skowhegan.org>; "'dskeith@somtel.com'" <dskeith@somtel.com>; "'dmcgrath@katahdinlab.com'" <dmcgrath@katahdinlab.com>; "'jabrahamson@kstd.com'" <jabrahamson@kstd.com>; "'parisud@megalink.net'" <parisud@megalink.net>; "'john.leslie@bfi.com'" <john.leslie@bfi.com>; "'pcloutier@spsd.org'" <pcloutier@spsd.org>; "'wintle@saturn.caps.maine.edu'" <wintle@saturn.caps.maine.edu>; "'waterrat@megalink.net'" <waterrat@megalink.net>; "'sclukey@brewerme.org'" <sclukey@brewerme.org>; "'slane@agate.net'" <slane@agate.net>; "'wiley@pwd.org'" <wiley@pwd.org>; "'lawpca@gwi.net'" <lawpca@gwi.net>
Subject: RE: mercury report to Legislature

This message is in MIME format. Since your mail reader does not understand
this format, some or all of this message may not be legible.
Thanks for the comments.

1. Yes the table was omitted from Appendix 1, but not by design, rather by omission. Yet I am not sure it matters, because I gave you an updated one with the draft report. Do you still think I should have both in the report?

2. With respect to whether we did or did not have an AWQC for mercury, I was convinced by Bill Taylor at the December 15 meeting that we did not. I don't think it matters anyway, because the legislature's intent in suspending 420(1)(A), establishing interim limits, and directing DEP to develop an AWQC seems pretty clear that they think they have suspended the only mercury criterion we had.

3. I have it recorded that you said that. Am I wrong or did you say that and I just misunderstand what you meant?

4. The burden will not fall only on the point source dischargers. We already passed a statute in 1998 that reduces air emissions and have other programs in the works to reduce solid waste contributions. And nationally al lot has and will be done to curb air emissions. But since we have a statewide mercury advisory, we need to cut back where we can; hence our proposal. The legislature has the final say.

-----Original Message-----
From: bnicholson@woodardcurran.com [mailto:bnicholson@woodardcurran.com]
Sent: Wednesday, January 03, 2001 6:23 PM
To: Mower, Barry F; lotic@uninets.net; bmoore@midmaine.com; brentd@skowhegan.org; dskeith@somtel.com; dmcgrath@katahdinlab.com; jabrahamson@kstd.com; parisud@megalink.net; john.leslie@bfi.com;

pcloutier@spsd.org; wintle@saturn.caps.maine.edu; waterrat@megalink.net;
sclukey@brewerme.org; slane@agate.net; wiley@pwd.org; lawpca@gwi.net
Subject: RE: mercury report to Legislature

TO: Barry Mower, ME DEP

FROM: Jeff Toorish, MPPA

DATE: January 5, 2001

RE: Draft ambient water quality criteria report to the legislature

---

Barry, the Maine Pulp and Paper Association and its member companies appreciate the opportunity to provide the Department with comments on the January 2 draft mercury ambient water quality report.

Conceptually, we agree with the Department's recommended approach to continue with the interim limits and ongoing implementation of the mercury P2 plans, while a methodology and numeric ambient water quality criteria for mercury is developed. However, we believe the draft report needs significant changes before it is submitted to the Legislature. Most notably,

- There is no discussion in the introduction on total loading of mercury to Maine's surface waters. While the draft report correctly points out that an ambient water quality criteria that is less than "natural" background levels will be impossible for dischargers to meet, there should be some discussion on the relative contribution of mercury from point source discharges vrs. loadings from air deposition. As drafted, the report leaves the reader with the impression that by simply reducing mercury levels in wastewater effluent, fish consumption advisories in Maine could be lifted. NESCAUM has estimated that the air pathway is the predominant transport medium for both naturally occurring and anthropogenic mercury emissions.[1] Moreover, studies comparing fish mercury concentrations with rates of atmospheric deposition have found that airborne sources of mercury account for much of the aquatic system loading.[2]

  The report should clearly state that the fish consumption advisories apply to <u>all</u> inland surface waters, including great ponds that do not have any point source discharges. Clearly,

[1] NESCAUM, 1998. *Northeast States and Eastern Canadian Provinces Mercury Study. A Framework for Action.* Northeast States for Coordinated Air Use Management. February 1998.

[2] Rada et al. 1989. "Recent Increases in atmospheric deposition of mercury to north-central Wisconsin lakes inferred from sediment analysis". *Arch. Environ. Contam. Toxicol.* 18:175-181. Fitzgerald, W.F. 1995. "Is mercury increasing in the atmosphere? The need for an atmospheric mercury network (AMNET). *Water, Air, and Soil Pollution* 80:245-254. Rudd, J.W.M. 1995. "Sources of methylmercury to freshwater ecosystems: a review". *Water, Air, and Soil Pollution* 80:697-713.

reducing mercury levels in effluent discharges will have no measurable effect on water quality in those water bodies.

- BAF calculations. Two days notice is not sufficient time for us to fully review the Bureau of Health's proposed BAF methodology, and we will likely have significant comments on the appendix. Briefly, we question the use of the St. Croix and Sebago Lake water column data to derive BAFs. The St. Croix River total mercury level in the report is significantly less than levels measured by one of our member companies, and the Sebago Lake BAF is based upon a single data point. When adjusting the BAFs in Table 3 of the BOH report for dissolved mercury, the BAF value is reduced to approximately 250,000. The BAF in the GLI is 139,000. The 10^6 BAF is not consistent with those reported by EPA and would be the highest in the country. Accordingly, the report should simply refer the reader to the BOH appendix on the draft derivation of BAF's, rather than stating a 10^6 number that is extremely suspect. Lastly, given the difficulty in establishing a single BAF for all receiving waters, the report should also state that site-specific BAFs will be allowed to calculate site specific AWQC where appropriate.

- Fish consumption levels. Appendix 3 discusses the BOH's fish tissue action levels. We question the use of a 0.0324 kg/day fish consumption rate. EPA guidance recommends that local consumption rate data be used where available. Since Maine appears to have a local consumption rate study, why wasn't the 0.026 kg/day value used? There is no explanation in the report why Maine studies were dismissed in favor of EPA's fish consumption rate of 0.0324 kg/day. EPA has recently issued a FTAL of 0.3 ppm. Therefore, the BOH needs to provide a clear rationale why Maine's action level should be 0.2 ppm

- Stakeholder participation. DEP hosted two meetings with interested parties to solicit input on an ambient water quality criteria for mercury, and the executive summary leaves the impression that there was consensus among the SWAT Technical Advisory Group that a single AWQC would be appropriate. This was not the case, and SWAT members submitted comments in response to DEP's November 3 minutes. Appendix 1 should include copies of all comments submitted by SWAT members, and the report should clearly state that no consensus was reached on either an approach or a criterion.

- Compliance schedules. The DEP recommends that facilities that could not comply with the new FTC would be placed on a compliance schedule. There may be less resource intensive means to accomplish this. For example, there could be some type of rebuttable presumption specified in rule that facilities with an approved P2 plan would automatically be considered in compliance with the standard. The tiered approach to BMPs and P2 plans will

need to be fully explored through a stakeholder process that would facilitate the sharing of P2 efforts and the development of reasonable BMPs for different tiers and facilities. The mere fact that a particular facility is above a new criterion does not necessarily mean it is not performing well. Other factors such as source category, background concentration, raw material supplies, prior efforts at P2 implementation, etc. need to be considered.

- Comparison of state AWQC for mercury. If DEP intends to include the table comparing water quality criteria in different states, there should be a citation on the source of the information. Is this based on verbal discussions with state regulatory officials, taken from state statute or regulation, etc. Please explain. Additionally, the report mentions that some states have adopted the Great Lakes criteria. It's our understanding that the Great Lakes states do not have permit limits based upon the 1.3ppt wildlife criteria, and/or variances are being granted. Some discussion on how mercury control strategies are being implemented in these states may be helpful.

From: Michael Barden [mbarden@pulpandpaper.org]
Sent: Wednesday, January 10, 2001 5:20 PM
To: Mower, Barry F
Cc: Hafford, Annaleis; Bob Nadeau; Jeff Toorish; Courtemanch, Dave L; VanWie, David
Subject: Re: MPPA comments on draft mercury AWQC report

Barry,
It's obvious we'll continue to have some points of disagreement, and we can
have that debate with the legislature. As a minimum, we'd like to see an appendix in the report that would include all comments DEP received on the draft. At least the legislature would have the benefit of reading all points of view if they so desired. Again, thanks for giving us the opportunity to comment.
-----Original Message-----
From: Mower, Barry F <Barry.F.Mower@state.me.us>
To: 'Michael Barden' <mbarden@pulpandpaper.org>
Cc: VanWie, David <David.Vanwie@state.me.us>; Courtemanch, Dave L <Dave.L.Courtemanch@state.me.us>
Date: Friday, January 05, 2001 7:33 PM
Subject: RE: MPPA comments on draft mercury AWQC report

>Thanks for the comments. We agree with some and question others as
>discussed below.
>
>1. I agree that there should be some language to discuss atmospheric
>depositon and will add some. I do not intend to write that no controls on >point sources are warranted therefore.
>
>2. The report already says in the executive summary and in the main text
>that the fish consumption advisories apply to all fresh waters.
>
>3. For the report including the BAFs I gave everyone a week, not 2 days, >to comment. Clearly not much, but we are proposing to adopt the criterion >via rule-making which will give everyone more time to think about this. I >have changed the language to make this clearer.
>
>4. Regarding fish consumption levels, we have used 32g/d since the early
>90's for all fish consumption advisories, including dioxin and mercury. The ChemRisk study that proposed 26g/d was heavily criticized by 3 national experts we had review the study at that time. Anyway we will have a chance to discuss this as well during rule-making.
>
>5. Stakeholder participation. Appendix 1, the summary of the SWAT meeting, doesn't say there was consensus, it just indentifies the options discussed.
>The executive summary identifies the two options and says the DEP favors
>one. It also says that general consensus was reached at the Dec 15 meeting about using a pollutiton minimization approach. I don't find an email from Stewart after the Nov meeting. Was there one or some other form of communication? If so could I get a copy. We switched email systems around then and may have lost it. I thought that the meeting summaries would suffice to capture the meetings. I will discuss adding all the comments with people here.
>

>6. I agree that there may be other ways besides a compliance schedule, and have made changes to say so. We will discuss this as well during
>rule-making.
>
>7. I don't see the need for references on the states criteria table, I
>believe they are all reasonably accurate. And for the wildlife criteria,
>this is not a discussion of who did what with license limits, and what their implementation strategies are. I think those need to be discussed in rule-making but not in this table.
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>> -----Original Message-----
>> From: Michael Barden [mailto:mbarden@pulpandpaper.org]
>> Sent: Friday, January 05, 2001 4:10 PM
>> To: Mower, Barry F
>> Subject: MPPA comments on draft mercury AWQC report
>>
>> << File: ATTACH01.TXT >> << File: mercuryA.doc >>
>